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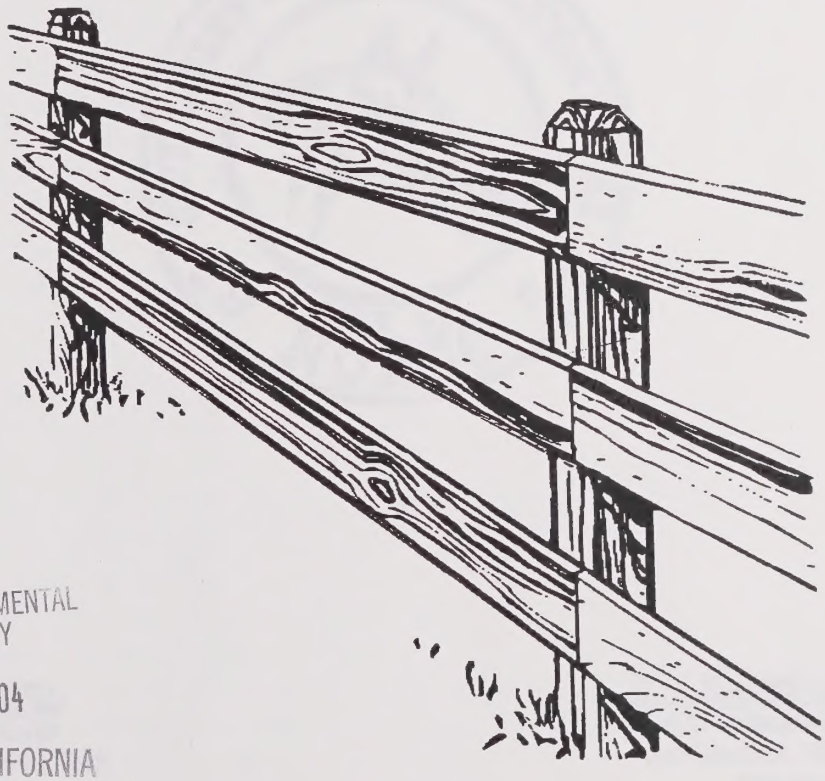
CITY OF NORCO GENERAL PLAN

CIRCULATION ELEMENT



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INTRODUCTION TO THE CIRCULATION ELEMENT

The City of Norco was incorporated to preserve an equestrian/animal-keeping lifestyle. As such the equestrian circulation system is as extensive as the road circulation and all policies of the Circulation Element need to adhere to, and promote that lifestyle. Reliance on the private automobile, for not only commuting to work but for shopping, educational, and social activities, is a necessity for Norco residents as well as for all Southern California residents. The unmatched freedom provided by the automobile and its associated system of freeways and arterial streets provides the expectation that timely and convenient access can be made of the far ranging assets of Southern California, ranging from mountain-skiing to ocean-surfing, and the amenities of a world-class city all in the same day. As a rural community designed around a circulation system of equestrian trails, the City of Norco provides a unique opportunity within that urban framework.

1.1 HISTORY OF THE CIRCULATION ELEMENT

The City of Norco Circulation Element, was originally adopted as part of a General Plan Program in 1970. That element had two significant updates and revisions in 1976 and again in 1983. The analyses conducted for each update of the Circulation Element have clearly demonstrated that the maintenance of a high level of service on the circulation system is under extreme pressure, and, therefore, the challenge of maintaining these expectations is formidable. The revision in 1976 was based on a survey of residents and their commuting patterns at that time. Until the revision in 1983 it had been anticipated that there would be a regional connection between Second Street in Norco and McKinley Avenue in Corona. With the revision in 1983 that connection was eliminated in exchange for the ultimate Hidden Valley Parkway connection to McKinley Avenue.

The element was further amended in 1993 to revise the Goals and Policies section to address issues that were of concern to the City Council. The outcome of this amendment was direction from the City Council to have studies prepared that would address the following issues:

1. How to accommodate regional traffic impacts on California Avenue without destroying the character of the street.
2. The use of Sierra and Valley View Avenues as bypass routes between the Sixth Street and Second Street freeway ramps.
3. The decision on whether to extend Western Avenue through.
4. To determine the appropriate classification for Second Street.
5. The possible connection between Norco Hills Road and Sixth Street.

6. An additional crossing of the Santa Ana River to reduce traffic on California Avenue.
7. The possible realignment of First Street with Lincoln Avenue.

The Circulation Element was again revised in 1994 to update the map and text to match the road classification changes that had occurred with the adoption of the Gateway Specific Plan.

1.2 PURPOSE OF ELEMENT

The primary purpose of the Circulation Element is to provide for a safe, convenient, and efficient circulation system for the City's automobiles and equestrians. Since there is strong encouragement for the use of its equestrian trails city-wide and for an equestrian lifestyle, there are additional issues that need to be addressed for the City of Norco in order to provide a safe, functional, and integrated circulation system for all forms of transportation. In order to meet this objective, the Circulation Element has been designed to accommodate all anticipated transportation needs. The determination for these needs is based on estimated intensities of the various land uses within the City and the immediate area; and the demand for transportation to those uses. This element describes the extent of physical improvements needed to accommodate anticipated traffic demand and also introduces other techniques which can be used to improve and maintain an acceptable level of service for the City's circulation system.

The element is also intended to serve as a basic plan of transport for other infrastructure systems including water and sewer lines. As the State's General Plan Guidelines indicate, the Circulation Element is actually an infrastructure plan which "concerns itself with the circulation of people, goods, energy, water, sewage, storm drainage and communications."

1.3 SCOPE AND FORMAT OF ELEMENT

This element is composed of four sections. The first section, the Introduction, includes a description of the Element's purpose and related plans and programs. The second section, which follows, contains the City's goals and policy statements for improving circulation in Norco. The third section is the Circulation Plan, which identifies standards for existing and future circulation systems, defines the City's service level objectives to be achieved by the circulation system, and the future travel demand. Also included in the Circulation Plan is a discussion of alternate modes of transportation, and the City's infrastructure network. The fourth section of the Circulation Element contains the implementation program, which contains specific implementation measures to realize the Element's Goals and Policies.

2. CIRCULATION ELEMENT GOALS AND POLICIES

The City's primary circulation goal is to provide a system that has adequate capacity to meet existing and future travel demands, for automobiles, equestrians, pedestrians, and bicyclists in a manner that maintains Norco as an animal-keeping community.

Future travel demand has been estimated by closely correlating expected land uses and specific plan developments within the City and the immediate areas. The year 2010 has been selected as the build-out year for the purpose of travel demand forecast. (Section 3.1.5 deals specifically with travel demand forecast).

In the year 2010 the population of the City of Norco is projected to be approximately 30,000. This represents only a small increase over the 1990 census population of 23,302. However, substantial commercial and industrial growth is expected to occur over the next 20 years. At build-out, the City is projecting approximately six million square feet of commercial space and over three million square feet of industrial space.

2.1 CIRCULATION SYSTEM ISSUES AND PROBLEMS

Under current traffic and street development conditions, the major issues are as follows:

- Distribution and handling of regional **commuter traffic** through the community;
- **Safety design coordination** for automobiles, equestrians, pedestrians, and bicyclists;
- Improving circulation and access within the **Gateway Specific Plan** Area;
- Movement within and out of the **southeast quadrant** of the City;
- Development of an adequate circulation system within the **Norco Hills** area;
- Maintaining and improving **alternative modes of transportation**;
- **Maintenance and improvement** of roadways and trails;

Commuter Traffic. A study of the arterials and intersections selected by the City for review with this update of the Circulation Element indicated that most of the Collectors and Major Arterials in the City are currently operating at a Level of Service (LOS) D or

better (See Appendix A [Level of Service Classification]). The City Council determined last year that this was an acceptable level-of-service. Table 1 summarizes the existing (1991) link ADT and LOS, with updates at specific locations in September 1997. Capacity analysis performed at the selected intersections also indicates that most of the intersections are operating at an acceptable Level of Service. Table 2 summarizes the existing (1991) LOS at these selected intersections.

There is concern that certain segments of collectors and major arterials within the City are used to serve through traffic or those bypassing congestion on freeways, and that this intrudes upon the rural nature of residential areas. The following by-pass routes were noted:

- North Drive/California Avenue/Sixth Street/Interstate 15
- Interstate 15/Second Street/Pacific Avenue/Lincoln Avenue/Route 91 (in City of Corona)
- Archibald Avenue (in Riverside County)/River Road/Route 91

These bypass routes are used primarily by commuters and have the potential to negatively impact traffic safety and congestion in the City of Norco. The majority of this traffic is early morning and late evening, and has a tendency to exceed posted speed limits. This high volume of traffic also creates access problems onto major arterials and collectors. Because of the high volume of traffic and those seeking shortcuts through residential areas, these residential areas are impacted with an amount of traffic not usually experienced on local streets.

Currently the Four Corners Transportation Commission, is examining transportation improvements in the area where Riverside, San Bernardino, Orange, and Los Angeles Counties meet, and is recommending the study of a main arterial corridor linking Pine, Schleisman, and Arlington Avenues by bridging the Santa Ana River near the Hidden Valley Wildlife Area. This study is considered to be a high priority project among the many projects recommended for implementation. This east-west arterial has also been proposed to the CETAP Advisory Committee for the Riverside County Integrated Plan (RCIP), a planning effort expected to take approximately three years to complete and which will result in an updated Riverside County General Plan. This arterial will accommodate the majority of commuter traffic presently using California Avenue and Sixth Street through Norco to the I-15 Freeway.

TABLE 1
EXISTING ARTERTIAL SEGMENT AVERAGE DAILY TRAFFIC VOLUMES AND LEVEL OF SERVICE

ROADWAY SEGMENT	NUMBER OF LANES	EXISTING (1998)	
		ADT	LOS
Hamner Avenue			
First Street to Third Street	4	24,210	C
Third Street to Sixth Street	4	17,700	C
At Santa Ana River crossing	2		
Sixth Street			
I-15 to California Avenue	4	16,270	C
California Avenue			
North Drive to Sixth Street	2	8,450	D
North Drive			
California Avenue to City boundary	2	8,060	C
River Road			
South of City boundary	2	7,230	B
Corydon Avenue to Second Street	2	10,610	E
Parkridge Avenue			
First Street to Second Street	2	2,910	A
Hidden Valley Parkway			
Hamner Avenue to City boundary	4	9,700	A
First Street			
Parkridge Avenue to Hamner Avenue	2,4	3,065	A
Second Street			
Parkridge Avenue to Hamner Avenue	2,4	10,810	A
Hamner Avenue to Corona Avenue	2	7,240	A
Third Street			
RCC to Hamner Avenue	4	5,920	A
Fourth Street			
Hamner Avenue to Hillside Avenue	2	1,160	A
Fifth Street			
Norco Drive to Hamner Avenue	2	7,515	A
Hamner Avenue to Hillside Avenue	2	1,540	A
Norco Drive			
Bluff Street to Fifth Street	2	5,085	A
Fifth Street to Hamner Avenue	2	2,800	A
Bluff Street			
River Road to Norco Drive	2	1,435	A
Corydon Avenue			
River Road to Norco Drive	2	3,870	A

TABLE 2
EXISTING LEVEL OF SERVICE AT SELECTED INTERSECTIONS

INTERSECTION	LEVEL OF SERVICE	
	AM PEAK	PM PEAK
North Drive/California Avenue	B	B
Sixth Street/California Avenue	B	C
Sixth Street/Hamner Avenue (▣)	C	C
Fifth Street/Hamner Avenue (▣)	C	C
Second Street/Hamner Avenue (▣)	D	D
Bluff Street/River Road	D	D
Corydon Avenue/River Road (▣)	C	C
Second Street/River Road (▣)	B	B
First Street/Parkridge Avenue	B	B

(▣) - Signalized intersection

The Riverside County General Plan previously showed a future extension of Etiwanda Avenue southerly across a bridge that would connect into Arlington Avenue somewhere near the Norco/Riverside city boundary. That crossing is not being considered anymore because of environmental concerns and cost constraints. This means that the City, while it can support the concept of a future crossing in a policy statement, needs to anticipate, and plan for the continuing use of California Avenue and Sixth Street as a commuter route to the I-15 Freeway. As such, it is likely that the traffic impact to these roads will increase in the future.

Another alternative to reduce regional through traffic on local roads, that the City is likely to consider for certain roads in the future, is the implementation of traffic calming measures. These are designed to allow local traffic access, but to discourage regional by-passing by lowering traffic speed to the point of making it inconvenient as a by-pass route. They also have the affect of reducing the speed of traffic to levels that are not threatening to the safety and lifestyle of the community.

Safety Design Coordination. Commuter traffic often conflicts with equestrian and pedestrian uses on Norco roadways. Motorists from outside the City are not always aware of the problems associated with equestrian use within public right-of-way or of the potential hazards, which are created. The City has taken steps to warn motorists of equestrian uses and the existence of livestock within the community. However, this awareness needs to be promoted to ensure the safety of equestrians and that the equestrian lifestyle of the community is not jeopardized in any way. In addition to appropriate signage, the City is continuing to provide adequate and necessary improvement of horse trails to promote the safe and efficient use of the roadways. The City also needs to evaluate the needs of pedestrians and bicyclists, especially on major arterials to ensure that the rural lifestyle is promoted, and that pedestrians and bicyclists are protected from vehicular traffic.

Gateway Specific Plan. The Gateway Specific Plan was adopted in 1992. The traffic analysis for this plan predicted an ultimate daily traffic count of over 71,000 additional two-way trips per day with build-out of this commercial district. The importance of adequate traffic control measures, and a well-planned circulation system cannot be over emphasized. In 1992 the Gateway Specific Plan called for the following major traffic circulation system modifications and improvements, some of which have been constructed.

1. Widen and realign Parkridge Avenue, First Street, Second Street, and Mountain Avenue (under constuction).
2. Close the Pacific Avenue intersection with First Street, providing a cul-de-sac for Pacific Avenue just north of the existing intersection (under construction).

3. Install landscaped medians on Hamner Avenue (completed).
4. Extend Mountain Avenue between First Street and the extension of Hidden Valley Parkway (completed).
5. Provide major intersection traffic control measures and landscape treatments (on-going).
6. Provide a street tree program on all project area roadways (on-going).
7. Vacate existing right-of-way no longer needed.
8. Continue to work with Caltrans to ensure the Hidden Valley Parkway Interchange is completed (completed).

Southeast Quadrant. In 1970 the City adopted its first Circulation Plan as part of the General Plan Program wherein McKinley Avenue in Corona was planned to ultimately connect with Second Street in Norco. In 1980 the boundary between Norco and Corona was revised and a large area was de-annexed from Norco and concurrently annexed into Corona and then subsequently rezoned to a higher residential density. Based on concerns of the increased traffic this would create, and the impact to the I-15/Second Street interchange, the City of Norco revised its Circulation Element eliminating the connection between Second Street and McKinley Avenue. Hidden Valley Parkway then became the regional connection between McKinley Avenue in Corona and Hamner Avenue in Norco.

The original plan for Hidden Valley Parkway in the Circulation Element was to have only Valley View Avenue connect. At some point, and for a reason that cannot be ascertained by staff, a connection was made between Corona Avenue and Hidden Valley Parkway. After the detachment of the Corona Hills area from the City, and the development of a master plan for that site at high residential densities, the City Council decided to remove the master-planned connection between McKinley Avenue and Second Street. The alternative connection became Hidden Valley Parkway/McKinley, and based on concerns of Corona Avenue residents about traffic and trash on their street, the developer of the Corona Hills Specific Plan was required to build a cul-de-sac on Corona Avenue.

When the Norco Hills Specific Plan (NHSP) (north of Hidden Valley Parkway and east of Corona Avenue) was approved in 1992 it provided for four connections to the City's circulation system. The first two connections will come from the construction of a backbone road between Hillside Avenue and Parkridge Avenue (El Paso Drive). The third access is a redirection of Corona Avenue into the NHSP project along another backbone road that will connect into El Paso Drive. The fourth connection is an outlet from El Paso Drive onto Norco Hills Road.

In September 1997, the Hidden Valley Parkway interchange with the I-15 Freeway was opened. Prior to that, while the different design options for the interchange were being

considered, Caltrans and the City of Norco together made the decision to close Valley View Avenue at Hidden Valley Parkway so as to reduce the construction and land acquisition costs for the interchange. Although the closure of Valley View Avenue had already been anticipated prior to interchange construction, many residents in the southeast quadrant of the City were unaware of the impacts that this, would cause them in terms of accessing Hidden Valley Parkway and Hamner Avenue, as well as the impacts to Second Street from school related traffic to Norco High and Norco Intermediate Schools.

The complaints to City Hall now began to come in from residents in the southeast quadrant of the City addressing the lack of access into and out of their neighborhood. The alternative openings had not yet been constructed through NHSP. Likewise, the Fire Department now had concerns about the increased emergency response time into that portion of the City without any connection to Hidden Valley Parkway.

On August 6, 1997 the City Council authorized a traffic study to determine the potential impacts of reconnecting Valley View Avenue and adding a Corona Avenue connection to Hidden Valley Parkway. The report concluded that while traffic would increase on the two streets, there would be a greater overall impact to the City by leaving the connections closed. Based on this recommendation, the City Council made the determination to connect both streets to Hidden Valley Parkway. Throughout this process, several residents around Corona Avenue and Valley View Avenue have maintained their concern about the impacts that would result from opening the two intersections again. The existing right-of-way for streets in the southeast quadrant are as follows:

Corona Avenue
existing: 45' south of First Street (15 + 30)
60' north of First Street (30 + 30)
60'north of Second Street (30 + 30)
ultimate: 60'

First Street
existing: 50' east of Valley View Avenue (25 + 25)
50' west of Corona Avenue (25 + 25)
ultimate: 60'

Second Street
existing: 50' east of Interstate 15 (25 + 25)
ultimate: 60'

Different options are being considered to slow down traffic on both streets once the re-

connections are made. Possibilities include a roundabout in the streets, off-set from Hidden Valley Parkway; narrowing the necks of the two roads as they connect into Hidden Valley Parkway to discourage in-bound turning movements; or speed humps. Any improvements to reduce speed and/or reduce through traffic on these two streets will have to be done in cooperation with emergency response agencies to make sure that their operations are not also impeded.

At the writing of this update document, the re-connections had not been completed and situations affecting the two proposed re-connections have changed. First, the Corona-Norco Unified School District in July of 1999 changed the school boundaries for Norco High School and Norco Intermediate School. Students from Corona, east of the I-15 freeway, now attend schools in the City of Corona, relieving some of the traffic congestion that had previously occurred on Second Street. In addition, the street circulation pattern for NHSP is now being constructed. A backbone road connection system between Corona Ave., Hidden Valley Pkwy., Parkridge Ave., Hillside Ave., and First Street east of the freeway is expected sometime during the year 2000.

Norco Hills (remaining). One of the last major areas for development within the City of Norco will be the area along the City's eastern boundary known collectively as Norco Hills which is in addition to and located to the north and east of NHSP. It has long been anticipated that Norco Hills Drive, which runs northeast from Hidden Valley Parkway, would meander through the hills and eventually connect to Sixth or Fifth Street. Norco Hills Drive would then become the major connection street for anticipated development in the hillside area.

Alternative modes of transportation, such as public transportation, should be promoted within the City for persons who choose not to utilize the automobile for various reasons. The Riverside Transit Agency (RTA) provides Fixed Bus Route and Dial-A-Ride services within the City of Norco and other portions of Western Riverside County. The City should continue to cooperate with RTA for the continuation of these services, and should encourage the establishing of adequate bus shelters to increase public recognition and their use.

Maintenance and improvement of streets and trails is an on-going process that is typically accomplished through routine maintenance and a rotating capital improvement program. There are maintenance and improvement projects that sometimes have to wait longer than the need presents itself so that funding becomes available.

The goals and policies presented below emphasize the importance of establishing a circulation system, which can support existing and future travel demands. The implementation measures identify specific programs and infrastructure improvements designed to achieve service level objectives.

2.2 SAFE, CONVENIENT, AND EFFICIENT TRANSPORTATION SYSTEM

The City desires development of a circulation system, which meets the transportation needs of both existing and future development.

GOAL 1: A circulation network of equestrian trails and streets, integrated with the planned land uses, that provide for a safe, efficient, and economic movement of people and goods.

Policy 1.1: Develop a circulation system of equestrian trails connecting all residential lots into a city-wide network that connects residential areas with commercial areas, public facilities, and open space/recreational elements.

Policy 1.2: Establish a trail system that is separate and safe from vehicular traffic with appropriate (signalized as necessary) road and intersection crossings to maintain circularity of the trail system.

Policy 1.3: Develop a circulation system of City streets, excluding freeways, capable of serving existing and future increases in traffic.

Policy 1.4: Follow appropriate City standards in designing and constructing future street improvements.

Policy 1.5: Take a leadership role in the preparation of a regional traffic mitigation program designed to resolve regional traffic issues which impact the City of Norco.

Policy 1.6: Logically relate local street patterns with arterial and collector streets shown in the Circulation Network. Through traffic on interior residential streets should be minimized and an improved circulation system developed which does not significantly deteriorate rural lifestyles in the City's rural residential areas. Pursuant to Policy 3.4, if the City determines that neighborhood access to arterials is best accomplished by access over roads designated as "local" in the Circulation Element, the City Council shall authorize the linking of local roads to arterials for this purpose so long as the number of average daily trips does not exceed the design capacity of the road in question.

Policy 1.7: Establish a signalized arterial street system that provides an acceptable level of service during peak hours under build out conditions.

Policy 1.8: Develop, and update as necessary, a program for general mitigation fees for roads and traffic signals.

Policy 1.9: Encourage a minimum Level of Service D for roadway segments and a minimum Level of Service D for intersections at peak hours under build out conditions.

Policy 1.10: Develop a five year capital improvement program which maintains or improves the Level of Service and transit performance standards adopted by the County of Riverside as a part of its Congestion Management Program.

Policy 1.11: Encourage the reduction of vehicle trips through implementation of Transportation Demand Management (TDM) strategies, such as requiring major employers to prepare Transportation Management Plans with provisions for carpooling, vanpooling, flexible work hours, etc.

Policy 1.12: Support, where feasible, the regional Transportation Demand Management strategies developed by the Riverside County Transportation Commission.

Policy 1.13: Prepare traffic studies for the following areas of special concern to identify problems and appropriate mitigation measures, and to implement mitigation measures as feasible:

1. Sierra Avenue between Sixth Street and Valley View Avenue, including the intersection of Sixth Street and Sierra Avenue.

2. Valley View Avenue between its intersection with Sierra Avenue and Second Street.

3. California Avenue between North Drive and Sixth Street (completed, California to remain at two lanes).

4. Second Street between Hamner Avenue and River Road, and Hamner Avenue to Hillside Avenue (completed, Second Street to be widened between Corona Avenue and Mountain Avenue).

5. Western Avenue between Fifth Street and Belgian Drive (completed, Western Avenue to not be connected).

6. Re-connection of Valley View Avenue and Corona Avenue to Hidden Valley Parkway (completed, both streets to be re-connected).

Policy 1.14: Continue to encourage the County and City of Riverside to include in their respective general plans, and then construct a bridge crossing of the Santa Ana River to connect Arlington Avenue to an east-west extension of Schleisman Avenue.

Policy 1.15: Encourage the utilization of Opticom Traffic Control System on all signalized intersections within the City.

Policy 1.16: Discourage the development, creation and utilization of private streets within the community.

Policy 1.17: City should not encourage traffic calming, street closure and unnecessary stop signs at the expense of emergency response.

Policy 1.18: Encourage the Corona-Norco Unified School District (CNUSD) and the Jurupa Unified School District (JUSD) to adjust their appropriate boundaries to detach the Eastvale area from the CNUSD and annex it into the JUSD.

Policy 1.19: Encourage the CNUSD to adjust school boundaries to match corporate boundaries so that Norco students go to Norco schools and the same for Corona, and eventually Eastvale.

2.3 ALTERNATE TRANSPORTATION MODES

Alternate modes of transportation for Norco residents include the City's equestrian trail system which provides access to all parts of the City with only a few exceptions. Other modes include public transportation that is provided by the Riverside Transit Agency (RTA) and by bicycle. Alternative modes are used by those who either do not have access to automobiles and must rely on an alternative, or by those who otherwise choose to leave their cars at home. Bicycle facilities should be considered, in conjunction with circulation system improvements to reduce dependency on private automobiles and to encourage regional recreational/transportation use in addition to that already provided by the equestrian trail system. A separate bicycle transportation plan is being considered at the time of preparation of the Circulation Element.

GOAL 2: Encourage the use of alternate transportation modes.

Policy 2.1: Encourage the use of the City's equestrian circulation system for uses other than recreational where feasible, such as the installation of hitching posts, water troughs, and feed bins along equestrian trails that are close to commercial centers and public gathering places.

Policy 2.2: Continue to cooperate with the Riverside Transit Agency for the provision of public bus service (fixed route and Dial-a-Ride).

Policy 2.3: Establish bus shelters at RTA stops to increase public recognition and use of the local and regional transit system.

Policy 2.4: Cooperate with Caltrans and the County of Riverside in providing sites and improvements for Park-and-Ride facilities.

Policy 2.5: Continue to maintain and improve the City's system of equestrian trails to also meet the needs of pedestrians within the community.

Policy 2.6: For commercial areas along Sixth Street, encourage on-site, and between site pedestrian connections to adjoin businesses and parking areas that are separate from the equestrian trails.

Policy 2.7: Support the development of the Crest to Coast Trail (equestrian, biking and hiking) through the Santa Ana River corridor.

Policy 2.8: Prepare a bicycle transportation plan in conjunction with the Crest to Coast Trail to provide City access to the trail for both equestrians, pedestrians, and bicyclists; and to qualify for state and federal funding to help pay for the trail improvements.

Policy 2.9: Provide a system of bicycle facilities (paths, lanes, and routes) in conjunction with circulation system roadway improvements to separate bicycle traffic from equestrian trails.

Policy 2.10: Continue to cooperate in the development of the Santa Ana River Equestrian Trail through the City.

Policy 2.11: Provide safe and convenient equestrian/pedestrian access between residential neighborhoods and the parks, open space and schools which service those neighborhoods.

Policy 2.12: Provide safe crossings of major arterials for pedestrians and equestrians.

2.4 SEPARATION OF TRAFFIC

Separating heavier non-residential traffic, particularly intra-community commuter traffic, from residential areas helps preserve neighborhood character and safety. Higher capacity roadways are intended to accommodate this heavier traffic to reduce and avoid impacts to residential areas.

GOAL 3: Separate vehicular traffic associated with regional commuter and commercial users from residential areas.

Policy 3.1: Provide a circulation network, which includes higher capacity roadways for commuters and commercial users to avoid overflow into adjacent residential areas. Where a neighborhood does not have access to a secondary road to convey neighborhood traffic to arterial roadways, the City Council shall authorize the use of local roads for neighborhood and emergency access between the neighborhood and arterial roads.

Policy 3.2: Establish a system of truck routes that reduces truck traffic on residential streets.

Policy 3.3: Encourage the design of a residential street system that reduces through traffic, or reduces the speed of through traffic. These street designs may include "traffic calming" methods where these methods would not impede access and response time by emergency vehicles.

Policy 3.4: Discourage "short-cuts" through residential neighborhoods by minimizing the linking of local street connections to arterial roads. However, in neighborhoods not directly served with reasonable outlets to arterials, the elimination of local street connections can have the effect of maximizing traffic impacts on the few outlets that do exist. This creates a "bottleneck" situation at those outlets rather than spreading the traffic volumes over more options. To avoid "bottlenecking" in neighborhoods that have limited access in and out, the City Council where necessary, shall authorize the linking of roads designated as "local" in the Circulation Element" for neighborhood access to arterial roads.

Policy 3.5: Preserve existing mature trees as a method of separating streets and adjacent property or trails. This can be accomplished by realigning roadways or by relocating the trees. Tree protection and/or relocation feasibility should be reviewed on a project by project basis.

2.5 PARKING

Adequate and convenient parking is an essential part of an effective circulation system. Sufficient off-street parking increases the overall efficiency of the circulation system by providing motorists better visibility of both vehicular/pedestrian movements along the roadways.

GOAL 4: Ensure the provision of adequate off-street parking for all land uses including Sixth Street where a provision has been made to reduce on-site parking requirements in exchange for pedestrian connections between adjoining buildings, properties, and public parking facilities.

Policy 4.1: Require all new developments to provide adequate off-street parking based on expected parking needs.

Policy 4.2: Provide adequate loading areas within off-street parking areas for all commercial and manufacturing land uses.

3. THE CIRCULATION PLAN

The Circulation Plan consists of three components: the Street and Trail Network, the Public Transportation Network, and the Infrastructure Network. Each component consists of the following sections:

Street Network
- Existing Circulation System
- Truck Routes
- Pedestrian/Equestrian Trails
- Traffic Level of Service Standards
- Future Travel Demand
- Revised Circulation Element

Public Transportation Network
- Fixed Route System
- Dial-a-Ride System

Infrastructure Network
- Water System
- Sewage System
- Storm Drain

3.1 STREET AND TRAIL NETWORK

3.1.1 STREET CIRCULATION SYSTEM

A network of local streets, collector streets, major arterials and the Interstate 15 Freeway serve the City of Norco. In addition, the City has many privately maintained streets, some which are developed to City standards for local public streets.

The Circulation Element classifies City streets as Major Arterial, Collector or Local Streets (Exhibit 1). Streets designed to less than City standard requirements are often categorized as private streets or drives.

Exhibit 2 shows the existing (1998) average daily traffic volumes on the collectors and major streets and peak hour volumes at selected intersections. Traffic count data is presented in Appendix E in a separate volume.

URBAN ARTERIAL

The Urban Arterial classification is applied to roadways that at buildout will have six lanes of travel (three each direction) within a right-of-way width of 110' and a curb to curb pavement width of 86'. It is designed to accommodate regional through traffic with a limited number of accesses and driveways. Hamner Avenue is the only road in Norco with this classification.

Hamner Avenue is the major north-south roadway through the City linking the City of Corona to the south and the Eastvale and Jurupa Community Plans of Riverside County to the north. The name of the road changes to Main Street in the City of Corona and to Milliken Avenue in the County of San Bernardino. Hammer Avenue was designated as State Route 31 prior to the completion of the Interstate 15 Freeway through the City. It was removed from State Route classification after completion of the freeway and is currently under the jurisdiction of the City of Norco.

Primarily serving commercial development along both sides of the road, Hamner Avenue currently provides two through lanes in each direction. A raised landscape median separates north and south bound traffic along Hamner Avenue from Hidden Valley Parkway north to First Street, with a two-way left turn lane providing traffic separation through the remainder of its' 3.75 mile course through Norco. A small portion of Hamner Avenue north of Sixth Street transitions to a two-lane roadway as it crosses the Santa Ana River due to existing width restrictions of the Hamner Avenue Bridge. This two-lane bridge is one of the major local crossings of the Santa Ana River. The majority of the street right-of-way has been dedicated, although several locations do not have full street improvements.

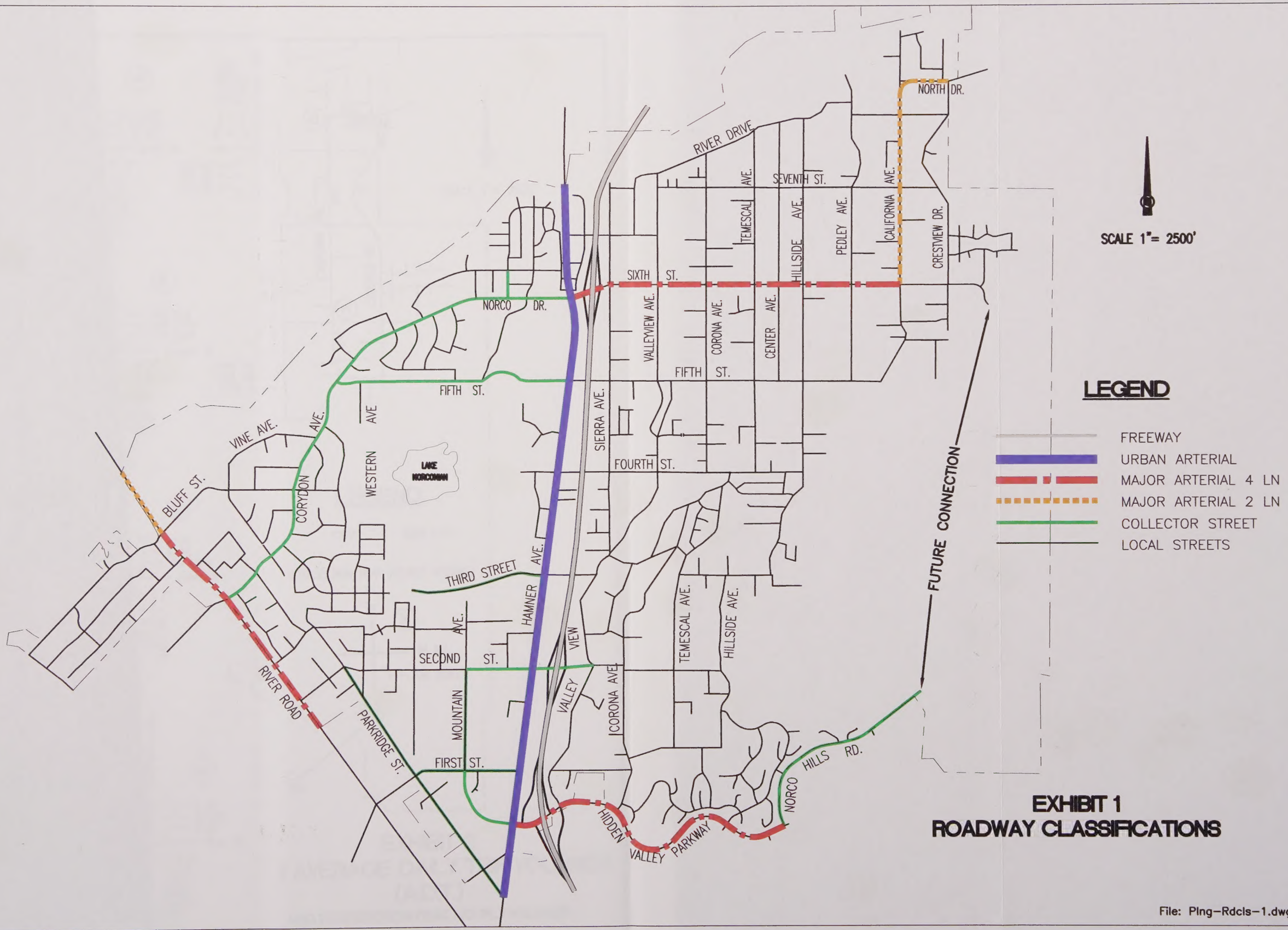

EXHIBIT 1
ROADWAY CLASSIFICATIONS

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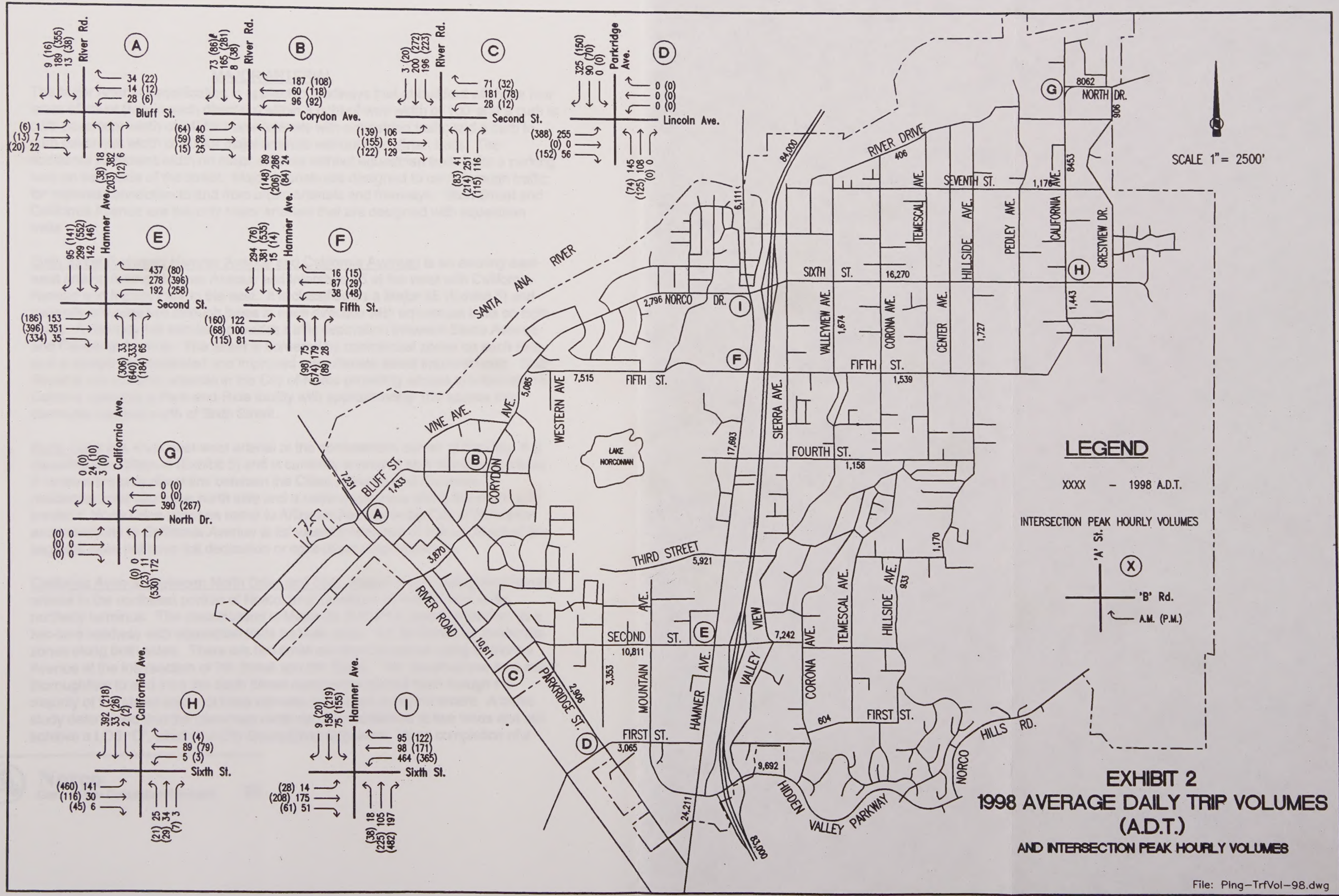


EXHIBIT 2
1998 AVERAGE DAILY TRIP VOLUMES (A.D.T.)
AND INTERSECTION PEAK HOURLY VOLUMES

File: Plng-TrfVol-98.dwg

MAJOR ARTERIAL

The Major Arterial classification is applied to roadways that at buildout will have four lanes of travel (two in each direction) within a right-of-way width of 100' and a curb to curb pavement width of 64' for major arterials with equestrian trails; and a curb to curb pavement width of 80' for major arterials without equestrian trails. The additional pavement width on major arterials without equestrian trails is for a parking lane on each side of the street. Major arterials are designed to carry through traffic for regional connection to and from urban arterials and freeways. Sixth Street and California Avenue are the only major arterials that are designed with equestrian trails.

Sixth Street (between Hamner Avenue and California Avenue) is an existing east-west arterial linking Hamner Avenue and Interstate 15 at the west with California Avenue and Ingalls Park to the east. It is classified as a Major 4E (Exhibit 5) and currently provides two through lanes in each direction with equestrian trails on both sides. A two-way left turn lane provides traffic separation between Sierra Avenue and California Avenue. The street is bordered by commercial zones on each side and is completely dedicated and improved with ultimate street improvements. Sixth Street is one of three arterials in the City of Norco providing access to Interstate 15. Caltrans operates a Park-and-Ride facility with approximately 100 spaces for commuter use just north of Sixth Street.

North Drive is a short east-west arterial at the northeastern corner of the City. It is classified as a Major-4 (Exhibit 5) and is currently improved as a two-lane roadway. It remains the only direct link between the Cities of Norco and Riverside. A residential zone along the north side and a commercial zone along the south side border it. North Drive changes name to Arlington Avenue in the City of Riverside, and transitions to California Avenue at its' westerly terminus in Norco. Much of this segment does not have full dedication or right-of-way improvements.

California Avenue (between North Drive and Sixth Street) is an existing north-south arterial in the northeast portion of Norco, and transitions to North Drive at its northerly terminus. The classification is Major-2E (Exhibit 5) and is improved as a two-lane roadway with equestrian trails on both sides. It is bordered by residential zones along both sides. There are two small commercial zones along California Avenue at the intersection of 7th Street and 6th Street. The street serves as a major thoroughfare to and from the Sixth Street commercial district even though the majority of the street does not have ultimate dedication or improvement. A traffic study determined that the pavement width can be maintained at two lanes and still achieve a LOS "D", which the City Council has approved. Upon completion of a

bridge over the Santa Ana River connecting Arlington Avenue to Schleisman Avenue, California Avenue should be downgraded from a Major Arterial to a Collector or Local.

River Road is an existing north-south arterial linking the City of Corona to the south with the Jurupa Community Plan area to the north. The classification is Major-4 (Exhibit 5) with the majority of it fully dedicated and improved with four lanes of traffic and a raised landscaped median island between Second Street and Corydon Avenue. The portion north of Corydon Avenue transitions to a two-lane roadway as it crosses the Santa Ana River due to existing width restrictions of the River Road Bridge. This two-lane bridge serves as the second of two major local crossings (besides the I-15 bridge) of the Santa Ana River used by surrounding residence and commuter traffic.

Hidden Valley Parkway is an existing east-west arterial along the southern boundary of the City, which extends east from Hamner Avenue to McKinley Avenue. Portions of this street form the boundary line and share right-of-way with the City of Corona. The street is classified as a Major-4 (Exhibit 5) raodway. The majority east of Hamner Avenue is fully improved with four lanes of traffic separated by a painted median first and then by a raised landscaped median. Residential zones exist on both north and south sides of this arterial, except a small portion just east of the I-15 Freeway. West of Hamner Avenue Hidden Valley Parkway becomes Mountain Avenue through the Gateway Specific Plan Area. The four lanes become two lanes north of First Street.

A modified interchange connection with the Interstate 15 freeway was completed in 1997 with a planned future expansion of the design to a full "cloverleaf" (timing unknown). This interchange replaced an existing freeway overcrossing and realigned Hidden Valley Parkway to form a four-way intersection with Hamner Avenue, and allowed for the loop connector to Mountain Avenue at First Street.

COLLECTOR

The collector classification is applied to roadways that at buildout will have four lanes of travel (two each direction) within a right-of-way width of 88' and a curb to curb width of 64'. It is designed to collect traffic from local streets and carry it to major arterials. Collector roads are designed to include an equestrian/pedestrian trail on one side.

Corydon Avenue is a north-south collector roadway connecting Norco Drive to the north with River Road on the south, and continues southwesterly into the City of Corona. This street is bordered on both sides by residential zones, and is fully dedicated and improved with ultimate street improvements.

Fifth Street is an existing east-west collector road serving residential and mixed-use areas in the central portion of the City between Corydon Avenue and the Interstate 15 Freeway. East of the freeway Fifth Street becomes a local street and is primarily bordered by residential zones. The right-of-way for Fifth Street is generally fully dedicated, but the street remains a two-lane roadway through most of its length. The portion of Fifth Street just west of Hamner Avenue is bordered on the north by Snipes Park and on the south by commercial and light industrial zones. Further west, Fifth Street is bordered on the north by residential zones and on the south by the U.S. Naval Weapons Station, California State Rehabilitation Center, and Wayne Makin Park. Due to the variation in adjoining uses and staged development, much of Fifth Street remains only partially improved. Due to the City of Norco's continuing policy of protecting mature eucalyptus trees whenever possible, the portion of Fifth Street in front of the State's facility has been improved with a raised median island.

First Street is an existing east-west Collector serving the Gateway Specific Plan Area from Hamner Avenue to River Road. The easterly portion of First Street near Hamner Avenue is fully improved to ultimate width, with the remaining portions partially constructed with two lanes of traffic. The planned realignment of First Street at its' westerly terminus is scheduled to be completed in 2000, which will help provide a major connecting link between the City of Corona on the west and the commercial district of the Gateway Specific Plan Area to the east.

Norco Drive is an east-west collector connecting Hamner Avenue on the east with Corydon Avenue to the west. Norco Drive is bordered predominantly by residential zones except at its' intersection with Hamner Avenue. The street is fully dedicated and constructed with ultimate street improvements throughout its entire length.

Parkridge Avenue (between Cota Street and Second Street) is an existing north-south collector sharing some right of way with the City of Corona. It provides a parallel corridor with River Road to Hamner Avenue, connecting the City of Corona on the south with Second Street on the north. It is primarily bordered by residential zones through much of its length, and is constructed as a two-lane roadway.

Second Street is an existing east-west collector serving as one of three connections to the I-15 Freeway. Though much of Second Street is bordered by residential zones, portions of this street are constructed with commercial development, especially near its' intersection with Hamner Avenue. Through the commercial district, Second Street is fully dedicated and improved with ultimate street improvements. The easterly portion of Second Street provides the main thoroughfare for access to Norco High School and Wyle Labs. It is bordered primarily by residential zones, and is constructed as a two-lane roadway. The

westerly portion of Second Street transitions to a two lane roadway at Mountain Avenue, and is also bordered by residential zones, except its westerly terminus at River Road where a small amount of commercial frontage exists. It serves as the main connection between the City of Corona on the west to the commercial zones of Hamner Avenue and the I-15 Freeway. In order to provide ultimate improvements through this portion of the street, several residences would need to be acquired due to the minimal building setbacks, which would result with ultimate street build-out. The traffic study conducted for Second Street recommended that Second Street be widened and improved to four lanes between Mountain Avenue on the west and Corona Avenue on the east. West of Mountain Avenue and east of Valley View Avenue, Second Street will remain a Local street at two lanes.

Third Street (between Riverside Community College and Hamner Avenue) is designated as a Collector, and currently provides the only means of accessing Riverside Community College. It is fully dedicated and improved with ultimate street improvements, and has a raised landscaped median island throughout most of its' length. Originally designed to continue westerly through the adjoining residential zones and link with Corydon Avenue, public concern over traffic resulted in terminating the street in a cul-de-sac at the westerly boundary of the college.

LOCAL STREET

The Local Street classification is applied to roadways that at buildout will have two lanes of travel within a right-of-way width of 60' and a curb to curb pavement width of 36'. Local street standards can be applied for commercial or residential uses. Local streets are intended to provide access to adjacent properties. They also serve as legal easements for updating public utilities. Any street not classified as an arterial or collector is included in this classification, with the exception of private streets or drives.

PRIVATE STREETS OR DRIVES

There are a number of private streets or drives, which currently exist within the community. Private streets are typically designed to public local street standards, but for one reason or another, are not accepted by the City for ongoing maintenance and traffic control. Usually, this is because the street cannot be fully constructed at the time of development, due to lack of sufficient right of way or available funding. The street remains privately owned and maintained by the developer or adjacent land owners until such time as the remaining portions can be constructed.

Private streets can present several problems however, and should be discouraged wherever possible. Liability concerns with streets that are designed to less than normal standards in visibility, gradient, and/or widths are often voiced by both legal

and maintenance personnel. Frequently, these substandard design parameters have no easy means of correction in later years. The adjoining property is often fully developed by the time private owners grow tired of maintenance costs, and opportunities for the City to obtain additional right of way, or make changes in the existing design become nonexistent.

In addition, the future development, which normally triggers acceptance of the street by the City, occurs far enough into the future that maintenance costs become considerable. Since street repairs are often very minimal in the early years, they can sometimes be neglected by the owners with little consequence. Then, as the City assumes maintenance responsibilities, previously neglected repairs become critical and maintenance costs escalate.

INTERSTATE 15 FREEWAY

Interstate 15 Freeway, which traverses in a north-south direction through the central part of the City, is not under the jurisdiction of the City. It is currently a six lane freeway which provides access to the City of Norco through three diamond interchanges at Sixth Street, Second Street and Hidden Valley Parkway. Grade separation structures along Interstate 15 in Norco include an undercrossing at Third Street and overcrossings at Detroit Avenue, Fourth Street, and Fifth Street.

In 1991 Caltrans prepared the Route Concept Report of Interstate 15 indicating that this segment of freeway was operating at a Level of Service D with an annual average daily traffic volume of 82,000, and a peak hourly volume of 7,380 vehicles. The Route Concept Report recommended future construction of a total of eight general traffic lanes and two high occupancy vehicle lanes for this segment of the freeway. The Route Concept Report did not indicate a schedule of implementation. The annual report from Caltrans in 1996 indicated an annual average daily traffic volume of 99,000 and a peak hourly volume of 7,400 vehicles.

Caltrans operates two Park-and-Ride facilities in the City of Norco. One facility is located at the northeastern corner of Hamner Avenue and Sixth Street and contains 100 spaces. The second facility contains 200 spaces and is located west of Hamner Avenue on West Four Wheel Drive near the Interstate 15 / Second Street interchange.

3.1.2 TRUCK ROUTES

The City of Norco has designated and established commercial vehicle truck routes throughout the City. These routes indicate arterial streets that should be used for truck movements that exceed the established weight limits of local streets. Local and state laws do allow trucks to be on local streets where they exceed established

weight limits for the purpose of making deliveries. These deliveries are only allowed provided that the trucks use the most direct route between a particular delivery/pick-up location and the closest arterial (or freeway) that is designated as a truck route.

The established commercial vehicle truck routes in the City of Norco are:

- Hamner Avenue in its entirety through the City;
- Sixth Street from Hamner Avenue to California Avenue;
- California Avenue from Sixth Street to North Drive;
- North Drive east of California;
- River Road in its entirety;
- Hidden Valley Parkway east of the Hamner Avenue to Norco Hills Road;
- Mountain Avenue between Second Street and Hamner Avenue;
- Second Street east of Mountain Avenue to the I-15 Freeway

All commercial vehicle truck routes have been posted with signs indicating "Truck Route" located at all intersections of designated truck routes within the boundary of the City.

3.1.3 PEDESTRIAN/EQUESTRIAN TRAIL CIRCULATION SYSTEM

The motto "City Living in a Rural Atmosphere" arches over the profile of a horse on the City of Norco's official seal. This motto symbolizes a central long-term goal of Norco's community leaders. The voters of Norco have, for 25 years, maintained the majority of their City's land as animal-keeping properties of one-half acre or more.

The streets of Norco are lined with horse trails wherever possible, helping to maintain its commitment to the rural atmosphere. The City has eschewed the standard suburban sidewalk treatment in favor of decomposed granite pedestrian/equestrian trails. These trails are designated for pedestrian and equestrian use only and are not meant to serve as multi-purpose recreational trails.

This elaborate system of over 80 miles of well-maintained trails is regarded as a major asset of the community, and is an amenity that many residents have moved to

the City to take advantage of. The majority of all residential lots have direct access to this trail system. It affords an opportunity to ride through the urban environment and move from there into local and regional areas such as the Norco Hills and the Santa Ana River. The typical equestrian trail is twelve (12) feet wide, and is located along one side of the street. Ultimate trail improvements include a forty-two (42) inch high rail fence, which separates the trail from a 6-foot wide tree-lined parkway. This parkway serves as a buffer between vehicular traffic and the equestrian trail. The trails are marked with special equestrian signs where they cross roadways and are signed with the Equestrian Symbol (W45) warning signs and supplemented by the xing (W80) warning signs. Exhibit 3 illustrates the existing equestrian trail system in the City of Norco.

In 1955, the Santa Ana River was recommended to the State Parks Commission as a multi-purpose recreation area. Since that time, the river corridor has been viewed by many as an important regional recreation and open space resource. The river corridor covers three counties and has always had the potential to include a regional trail system from the crest of the San Bernardino Mountains to the Pacific Ocean, some 110 miles long. In 1969, the first "Crest to Coast Trail Event" was held, drawing attention to the significance of the river corridor and the need for a continuous trail system.

The County of San Bernardino Regional Parks Department has completed a comprehensive study of the river corridor covering the counties of San Bernardino, Riverside, and Orange. The overall goal of this study was to promote and to plan for a continuous multi-use regional trail system along the Santa Ana River corridor linking the Pacific Ocean and the Pacific Crest Trail. The City of Norco is located approximately halfway between the Pacific Ocean and the San Bernardino Mountains. This study envisioned the expansion of the City's local trail system with three proposed points of access to the river corridor; 1) Corydon Avenue at Fifth Street; 2) northerly terminus of Old Hamner Avenue; and 3) the northerly terminus of Pedley Avenue.

The City's adopted Master Plan for Parks, Recreation and Open Space identifies the existing equestrian trail system and makes recommendations for future implementation/and improvement. The trail system should provide circulation for pedestrian and equestrian use. With the exception of Primary Access Trails described below, all bicycle traffic is intended to stay within the street pavement and not on the pedestrian/equestrian trails. This will accommodate the community's need for various modes of transportation and reduce conflicts between them.

SCALE 1"= 2500'

LEGEND

TRAIL NO FENCE ----------

TRAIL W/ FENCE ——————

EXHIBIT 3
EQUESTRIAN CIRCULATION SYSTEM

File: Plng-Htrl-1.dwg

The trail system includes several types of trails and organizes the community's circulation needs into a coherent pattern of movement. This system minimizes conflicts between pedestrians and equestrians and defines each trail according to its function and level of enhancement. The three types of trails are:

Primary Access Trails:

A primary access trail system would consist of major circulation routes, not necessarily adjacent to the streets which are wider and which can carry the bulk of non-auto traffic volume moving within and through the City. This system will integrate pedestrian, equestrian and bicycle circulation within wider trail sections, and which will minimize conflict between bicycles and equestrians through trail location and buffer planting. The primary trails would connect the community to major regional features including Riverside Community College, Norco Hills, the Santa Ana River, and parks as feasible. Currently there are no trails in the City that can be designated as primary access trails, and the opportunity for creating such trails is limited because of the extent of development in the City. The Coast to Crest Trail when completed will be the backbone primary access trail within Norco. Other primary access trails in the City should be designed to provide equestrian and bicycle access to the regional facilities that will be located along that corridor. It is anticipated that these types of trails will be located in areas where wider trail sections can be accommodated such as vacated streets, public utility easements, and flood channels. Development of primary trails should include rest stops, information kiosks, and maps of the trail system.

Secondary Trails:

Secondary trails are the trails that connect to the primary access trails and to most locations in the city. These are the twelve foot trails that are designed to be adjacent to the streets and represent the bulk of trails that currently exist. They carry most of the City's pedestrian and equestrian circulation. They are not intended to carry the City's bicycle traffic because of the potential conflict with equestrian traffic (Section 3.1.4). Since these trails are designed to carry most of the equestrian traffic in the City, and are highly visible by being adjacent to the streets, appropriate landscaping should be incorporated into street/trail sections to enhance the use of the trails, and to improve the aesthetics of the community.

Tertiary Trails:

Tertiary trails are meant only to provide access to the main trail system from small residential areas that are not adjacent to the trail system. Since the tertiary trails carry only a small volume of traffic, surfacing and planting will be minimal.

Use Of Drainage Channels as Trail Corridors:

As described above, drainage channels can also provide a network of primary interconnections with the existing equestrian trails. By allowing access, these drainage channels can be incorporated as part of a primary trail system. Integration of the drainage channels may involve some surfacing and planting treatment, and may require additional trail safety measures. Riverside County Conservation and Flood Control District has given conceptual approval to the City for the use of drainage channels for trail purposes, and the City is currently reviewing use priorities.

Natural equestrian trails are located away from the surfaced streets, and are generally located on the edge of town. These trails are important in enhancing the rural atmosphere because they provide trail users a unique opportunity to access the City's surrounding open space. They can provide an important link to the regional trail system as well as providing access to local landscape features such as the Norco Hills and the Santa Ana River. These trails accommodate hikers and equestrians, but are generally not wide enough to also accommodate bicycles. Rest stops for pedestrians and equestrians should also provided along the natural trails wherever possible.

3.1.4 TRAFFIC LEVEL OF SERVICE STANDARDS

In order to be consistent with the Riverside County Congestion Management Program (CMP), the City has adopted the use of the Highway Capacity Manual method in the evaluation of intersection Level of Service (LOS). Level of Service is a qualitative measure of traffic flow. At intersections, it is based on the estimated delay experienced by the average driver. Levels of service are designated from LOS A (best) to LOS F (worst). LOS F is the level at which the intersection is overloaded and is characterized by stop-and-go traffic with extensive delay to drivers. Table 3 shows the Levels of Service for Signalized Intersections. The City of Norco has established LOS D as the minimum standard for intersections during peak hours. Based on the Riverside County definition of LOS D Average Daily Traffic volumes (Appendix B), the City has adopted the minimum standard of LOS D for the planning of roadway segments. LOS E is considered the minimum standard for CMP purposes as recommended in the CMP legislation.

There are several factors that affect the capacity of a street, including the following:

- Level of service selected.
- Lane configuration.

- Width of Available Shoulders.
- Street Gradient.
- Curvature.
- Operating speed.
- Lateral clearance.
- Side friction generated by parking, driveways, intersections, and interchanges.
- Volumes of trucks, buses, and recreational vehicles.
- Spacing and timing of traffic signals.
- Sight distance.
- Pedestrian, equestrian, and bicycle traffic.

3.1.5 FUTURE TRAVEL DEMAND

Future travel demand has been estimated in close correlation with the expected land uses and specific plan developments. Year 2010 has been selected as the build-out year for the purpose of travel demand forecast. Specific plans included in the travel demand forecast are the Gateway Specific Plan (including the Interstate 15 Corridor Study), the Norco Hills Specific Plan, the Third Street Area Plan and the Rancho La Sierra Specific Plan (City of Riverside). The Savi Ranch Estate Specific Plan area which was immediately outside the northeast City boundary, was also indirectly included in the travel forecast analysis even though no development ever occurred there.

There will need to be another assessment for future travel demand made once the Program EIR for the proposed Eastvale Community Plan is made available as a public document. The Norco model was done in 1992 before traffic numbers for the higher density of development north of the river were available and is therefore outdated as far as what future demand is going to actually be. The traffic study that has been prepared for the Eastvale Community Plan assumes those higher densities. Future modeling for Norco will have to take those numbers into consideration and determine how the impacts to Norco are going to be addressed in the City's circulation system.

TABLE 3
LEVLES OF SERVICE FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	STOPPED DELAY PER VEHICLE (SECONDS)
A	< 5.0
B	5.1 – 15.0
C	15.1 – 25.0
D	25.1 – 40.0
E	40.1 – 60.0
F	>60.0

LEVEL OF SERVICE A describes with very low delay, i.e., less than 5.0 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LEVEL OF SERVICE B describes operations with delay in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

LEVEL OF SERVICE C describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

LEVEL OF SERVICE D describes operations with delay in the range of 25.1 to 40.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LEVEL OF SERVICE E describes operations with delay in the range of 40.1 to 60.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LEVEL OF SERVICE F describes operations with delay in excess of 60.0 seconds per vehicle. This is to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

The current travel demand forecasting model was developed to estimate future traffic volumes in the Circulation Element and was completed in 1992. The Norco Transportation Model delineated 63 Traffic Analysis Zones (TAZ) within the City based on land uses and existing roadway locations. The network of Collectors, Major Arterials along with the Interstate 15 freeway, that existed at that time were used as basic transportation links within the model. Existing and build-out land uses were provided by the City for each TAZ. The model used constant trip rates for each type of land use in trip generation. Future travel demand in terms of vehicle trips were estimated for each TAZ using trip generation rates recommended by the Institute of Transportation Engineers and San Diego Association of Governments. These trip generation rates were applied to the land use variables (such as number of dwelling units, square footage of commercial or industrial building, number of students, etc.) of each TAZ to produce the number of vehicle trips generated by or attracted to each zone. The model classified trip production and attraction as home-base work trips, home-base non-work trips and non-home-base trips.

The Norco Transportation Model was compatible with the (RIVSAN) model at the time when it was completed in 1992 with regards to method of analysis, traffic analysis zones grouping, highway network, external station traffic distribution and general consistencies in trip production and attraction. A RIVSAN 2010 run dated January 2, 1992 was provided by the Southern California Association of Governments (SCAG) as basis for a compatibility check. The link (roadway) network in the RIVSAN run included the Etiwanda Avenue crossing of the Santa Ana River and the existing crossings at Hamner Avenue and River Road. The RIVSAN model also included the Lincoln Avenue connection between First Street in Norco and Route 91 in Corona. The RIVSAN model was updated in 1999 and according to the Riverside SCAG office, they feel that development north of the river has been modeled correctly. The problem is that while the impacts have been determined, the impacts have not been addressed and mitigated appropriately.

The Norco Transportation Model was validated by 1991 ground traffic counts of collectors and major arterials. New traffic numbers have since been provided which will need to be accommodated in a new model for Norco.

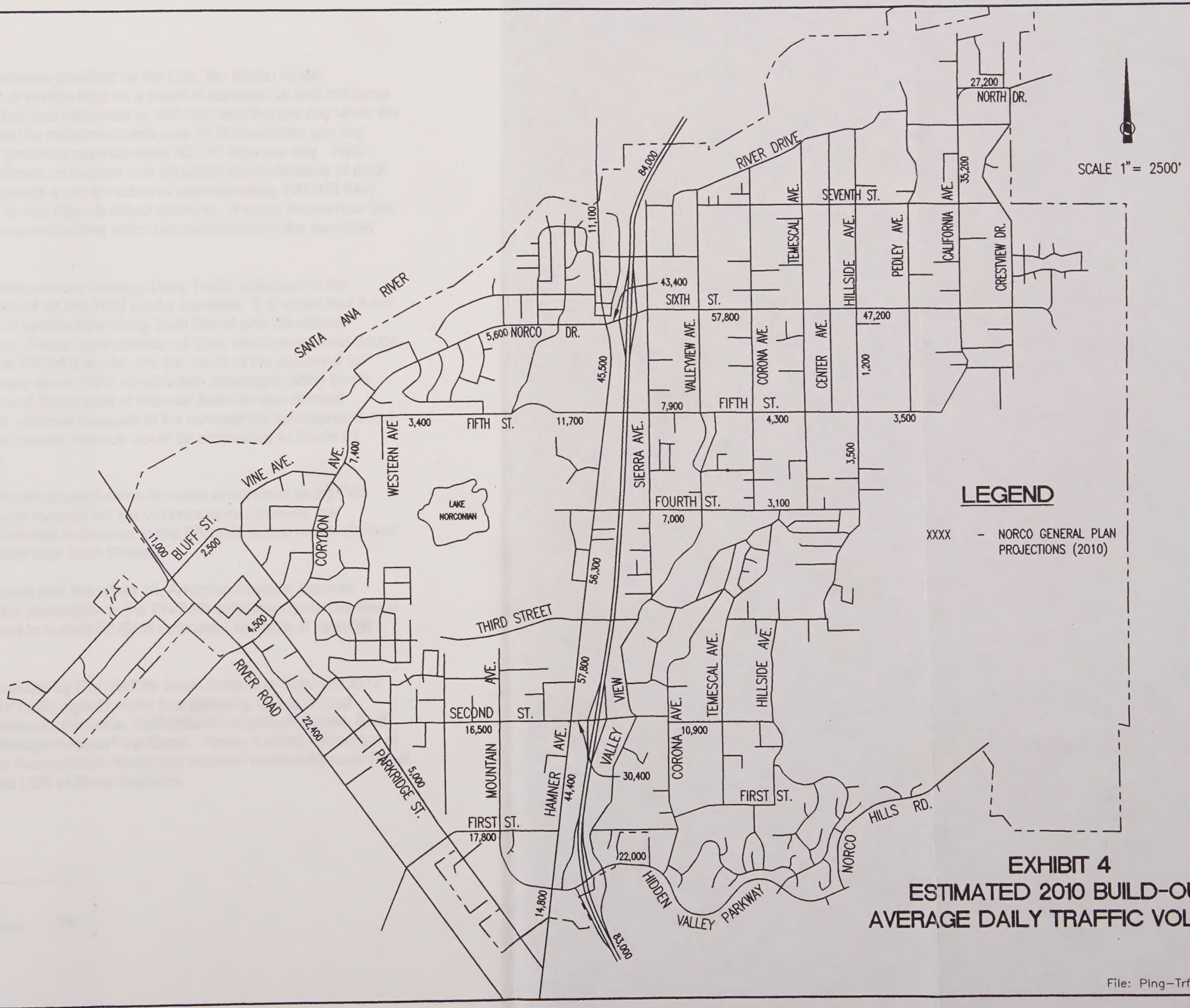


EXHIBIT 4
ESTIMATED 2010 BUILD-OUT AVERAGE DAILY TRAFFIC VOLUMES

File: Plng-TrfVol-10.dwg

Based on the land use parameters provided by the City, the Norco model determined the total number of vehicle trips as a result of commercial and industrial build-out in 2010. That number was estimated at 196,000 vehicles per day while the total number of trips generated by residential units was 74,000 vehicles per day. Other public services would generate approximately 40,000 trips per day. With adjustments to reflect the different production and attraction characteristics of each generator, the City will experience a net attraction of approximately 100,000 daily vehicle trips in 2010, based on the City's buildout scenario. It is not known how this might change with a new Norco model that takes into consideration the new land uses north of the river.

Exhibit 4 shows the estimated build-out Average Daily Traffic volumes on the existing roadway network, based on the 1992 model scenario. It is noted that there will be heavy concentration of vehicle trips along Sixth Street and the central segments of Hamner Avenue. These concentration of trips, which more than double the volumes estimated by the RIVSAN model, are the result of the assumed full development of the commercial areas (25% construction coverage) along these streets. First Street and Second Street east of Hamner Avenue also showed substantial increase in traffic volumes because of full commercial development and the RIVSAN assumption that Lincoln Avenue would be connected to Route 91 (subsequently constructed).

The Norco Transportation Model showed some increase in volumes along Fifth Street in the vicinity of Hamner Avenue but the volumes were relatively low compared to Sixth Street. This was in contrast to the RIVSAN output which showed Fifth Street being utilized more than Sixth Street.

Estimated ADT at external links with Interstate 15, Arlington Avenue, Hamner Avenue and River Road were compatible to the RIVSAN output because the Norco Transportation Model was set to accept RIVSAN estimated volumes at external stations.

Of the nine intersections selected by City staff for detail study, the build-out 2010 ADT volumes would warrant traffic signals at the four currently un-signalized intersections: California Avenue/North Drive, California Avenue/Sixth Street, Bluff Street/River Road, and Parkridge Avenue/First Street. Heavy turning movement at the intersections of Hamner Avenue/Sixth Street and Hamner Avenue/Second Street would result in unacceptable LOS at these locations.

3.1.6 REVISED CIRCULATION ELEMENT - YEAR 2010

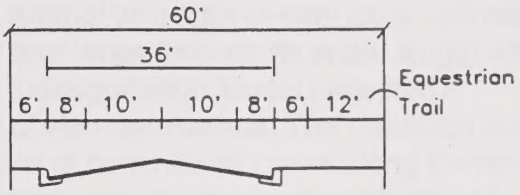
Based on the estimated 2010 build-out ADT volumes on the existing roadway network, Hamner Avenue and Sixth Street would require three through lanes in each direction to maintain an acceptable LOS D. A separate traffic study for California Avenue indicated that it can be kept at two lanes and still be able to maintain LOS "D". All other Collectors could continue to provide LOS D maintaining two through lanes in each direction. Exhibit 5 shows the proposed typical cross-sections of roadways based on the classifications in Table 4:

TABLE 4
PROPOSED TYPICAL CROSS-SECTIONS

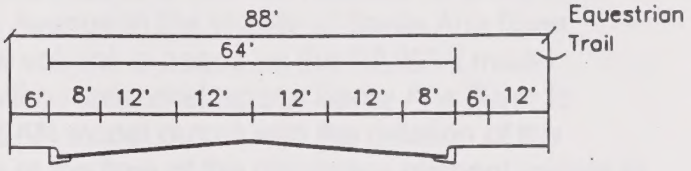
Classification	Right-of-way	Pavement/ No. of Lanes	Parkway
Local	60'	36'/2	Equestrian trail on one side
Collector	88'	64'/4	Equestrian trail on one side
Major Arterial 2E	tbd*	36'/2	Equestrian trails on both sides
Major Arterial 4	100'	80'/4	10' sidewalk on both sides and, 12' raised median
Major Arterial 4E	100'	64'/4	Equestrian trails on both sides
Urban Arterial	110'	86'/6	8' sidewalk, 4' parkway on both sides and 14' raised median or 10' striped median

* - to be determined

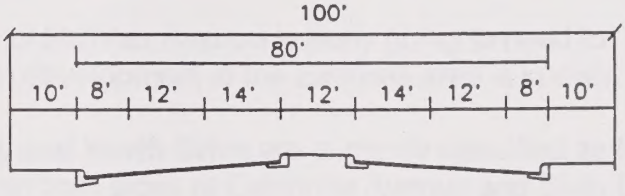
Local



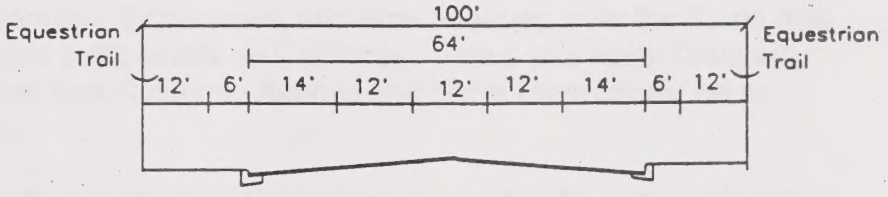
Collector



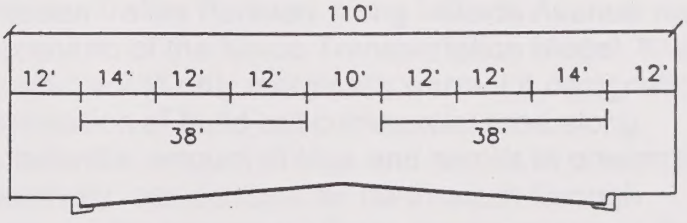
Major – 4
River Road



Major – 4E
Sixth Street
Hidden Valley Parkway (½)



Urban Arterial
Hamner Avenue Without Median



Urban Arterial
Hamner Avenue
With Raised Median

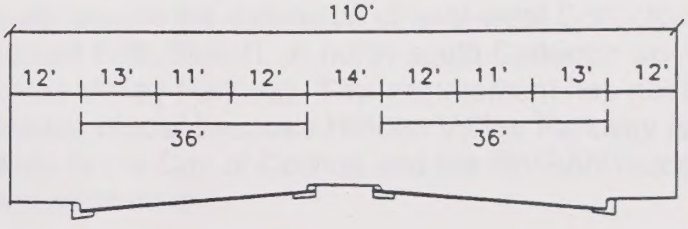


EXHIBIT 5
TYPICAL CROSS SECTIONS OF ROADWAYS

Hamner Avenue is classified as an Urban Arterial with right-of-way for an ultimate six lanes, although it is currently striped for four lanes through its entire length with the exception of the north end. The Norco Transportation Model projected a decrease in traffic volume at the south end of Hamner Avenue. The reduction could be the result of the assumed full development of commercial zones along Hamner Avenue, which increases the attraction of Norco and decreases the volumes of external trips. Traffic volumes also decrease to a level serviceable by a two lane roadway at the north end of Hamner Avenue in the vicinity of Santa Ana River crossing. However, this relatively low volume is based on the RIVSAN model assumption that Etiwanda Avenue will be extended across Santa Ana River to connect with Arlington Avenue. RIVSAN model output with the deletion of the Etiwanda crossing was not available at the time of the circulation element update in 1992, and with this update.

The width of the northern portion of Hamner Avenue is likely going to need to change once the full impacts from development in the Eastvale area is known.

California Avenue, Sixth Street, and North Drive are currently classified as Major Roadways with equestrian trails on both sides of California Avenue and Sixth Street. California is classified as Major 2-E and Sixth Street as 4-E. North Drive has an equestrian trail only on the north side of the street. Upon completion of a bridge connection between Arlington, Schleisman, and Pine Avenues, over the Santa Ana River, it is anticipated that traffic levels on California Avenue and North Drive will drop significantly. At that time California Avenue and North Drive should be re-classified as Collectors.

Estimated build-out traffic on all other Collectors are moderate and would not require widening of the existing width of two or four through lanes. A link between Fourth Street and Hidden Valley Parkway along Hillside Avenue was tested in the 2010 build-out scenario of the Norco Transportation Model. It was concluded that the diverted traffic would only marginally warrant a designation of a Collector. The heavy concentration of build-out commercial area along Hamner Avenue attracts a substantial amount of trips and results in predominant east-west movements with relatively less demand for north-south through movements. For the same reason, the proposed hillside developments in the eastern region of the City would require the extension of east-west Collectors (Second Street, Fourth Street and Fifth Street). A north-south Collector would be required to connect to Hidden Valley Parkway. This requirement has not been tested in the Norco Transportation Model because Hidden Valley Parkway is loaded heavily by developments in the City of Corona and the RIVSAN model has not coded this link in the current model.

The current classification of roadways is basically consistent with the current roadway classifications in adjacent jurisdictions. However, the current classifications in the Jurupa Community Plan are not consistent with development being proposed and now occurring. A general plan amendment is being processed in the County that will increase the planned widths of most roadways there. When that does occur there will be inconsistencies between the classifications for Hamner Avenue and River Road in Norco and the corresponding roadways in the County. The classification of roads for primary connections between Norco and Corona are primarily consistent with one another. Section 3.3 specifically identifies compatibility between jurisdictions.

3.2 PUBLIC TRANSPORTATION NETWORK

The Riverside Transit Agency (RTA) operates a fixed route service and a dial-a-ride service for the City of Norco. The fixed route service for the City is Route 3, originally implemented on March 6, 1989.

Two vehicles operating thirteen trips per day, Monday through Friday, on an hourly frequency serviced the original route. In January 1990, Route 3 eliminated one vehicle and obtained a ninety-minute frequency. Due to increased demand this service has now reverted back to two operating vehicles. Ridership has increased since 1992 on Route 3, with the first two months in 1998 averaging 2926 passengers per month (1,272 average riders in 1990) for a daily average ridership of 146 passengers (64 in 1990). Route 3 has an average performance to date of 5.51 passengers per hour and 0.38 passengers per mile. It is operating with an average subsidy of $5.60 per passenger.

Extensive marketing research has been conducted in the Route 3 service area, especially in Norco, and input from various sources have revised the routing substantially improving performance. A January 1992 service change provided service to the Riverside Community College, Norco Campus. Another important change implemented for Route 3 was the extension of service to connect with Route 15 at La Sierra and Arlington, which now has a thirty-minute frequency. This has provided passengers another travel pattern through Norco and links Route 3 on the north end with the City of Riverside. The route includes destinations, which service the Department of Motor Vehicles and the Norco junior and senior high schools. In addition, the fixed route was enhanced with the addition of another vehicle.

One of the means of inducing people to ride public transit is to make the service as attractive as possible. Often times, the paradox of public transit is that additional service is not introduced until justification can be made. Existing ridership must exceed capacity. However, potential passengers indicate their unwillingness to use

public transit services unless improved.

The RTA also provides a dial-a-ride service to the City of Norco community. This service is available on a "call and response" method. Riders call a number requesting the time of pickup and destination desired. This service is offered currently at $1.25 per ride, and $0.60 for senior citizens and handicapped persons. Through February 1998, dial-a-ride had a monthly average of 1,312 passengers, for a daily average ridership of 44 passengers. Dial-a-ride has an average performance to date of 2.58 passengers per hour and 0.14 passengers per mile.

3.3 RELATIONSHIP TO OTHER JURISDICTIONS/PLANS

3.3.1 RIVERSIDE COUNTY

The area north of the City is unincorporated, under the administration of Riverside County. Currently, the area is within the boundaries of the Jurupa Community Plan, but is more generally known as Eastvale and as of December 1999 is part of the developing Eastvale Community Plan (ECP) that will replace the Jurupa Community Plan for this area of the county. Adoption of the ECP should occur sometime during 2000-2001. A traffic study has been prepared as part of the EIR process for the community plan, and although the EIR has not yet been certified, the traffic study is being used here for comparison purposes.

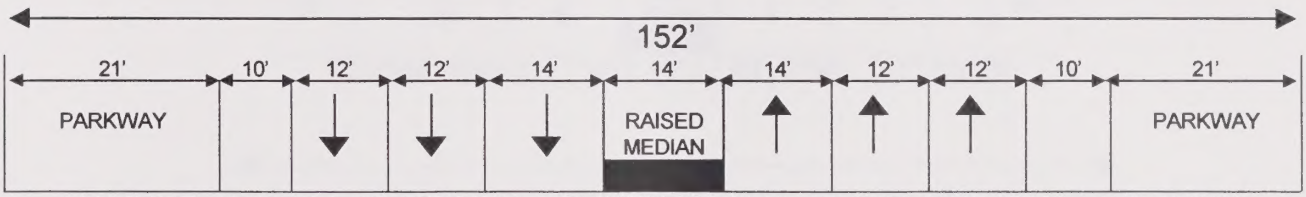
For existing conditions, there is some disparity between the ECP traffic counts and the latest traffic counts performed for the City of Norco. One reason for the discrepancy is the fact that the ECP study was completed in 1999, while the Norco study was completed in 1998 so the ECP numbers are generally higher near the river crossings:

	Norco	ECP
Hamner Ave. north of River Dr.	6,111	9,100
River Rd. north of Corydon Ave.	7,231	9,400

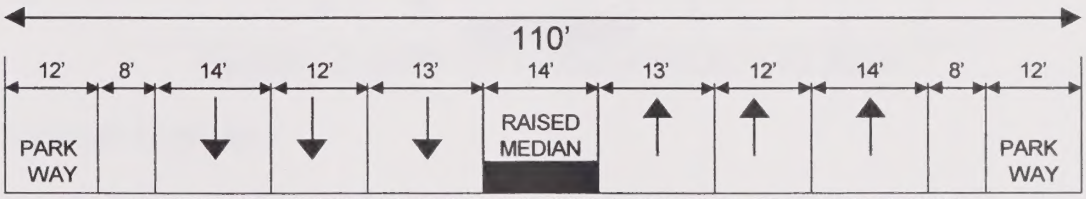
There is a greater discrepancy between the two studies when comparing future buildout traffic numbers. The Norco study shows a buildout condition of 11,000 ADT on River Road in the year 2010, while the study from the ECP indicates that that number will be 20,400. Likewise, for Hamner Avenue the Norco study indicated 11,100 ADT while the ECP study showed 42,000. The primary difference between the two numbers is that the ECP study was prepared taking into consideration the higher density housing that is being proposed and built north of the river, which numbers had not been determined when the Norco study was completed.

Previously, the land use density for future traffic determinations north of the river was three dwelling units per acre. Most of the tracts that are being approved range from 4 dwelling units per acre and up. The result is many more trips than what had been calculated when "future conditions" in the Norco study were determined.

The impact of this increase in numbers is the expanded road infrastructure that will be required to accommodate the traffic numbers. On Hamner Avenue, the County is considering a designation of "Major Urban Arterial" with a right-of-way section of 152' and three lanes of travel in each direction (with an option for 4). The buildout width of Hamner Avenue in the Norco Circulation Element is 110', and it also will accommodate three travel lanes in each direction; but there would not be enough right-of-way for any additional lanes without the City having to obtain more right-of-way. If Hamner Avenue were widened to its ultimate optional potential width of four lanes in each direction, there would have to be a transition to three lanes in the vicinity of the bridge and may result in congested conditions south and/or north of the bridge.



HAMNER AVENUE-RIVERSIDE COUNTY MAJOR URBAN ARTERIAL, 152' ROW

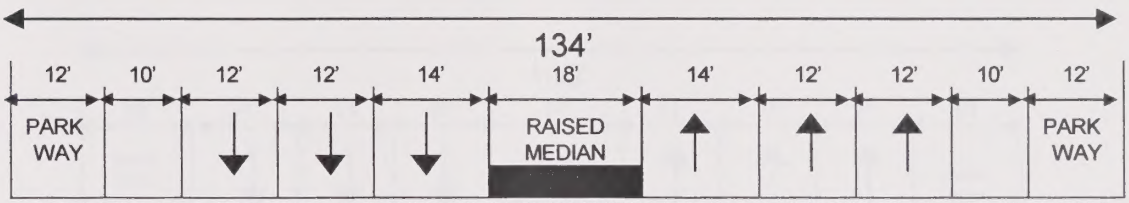


HAMNER AVENUE-NORCO CITY MAJOR-6E, 110' ROW

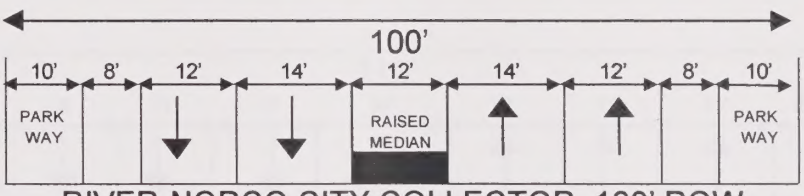
For River Road, the discrepancy is more of a concern. Under the existing Jurupa Community Plan, Archibald Avenue is designated as an "Arterial" with an ultimate right-of-way width of 110' with the possibility of two travel lanes in each direction. The buildout width now being considered by Riverside County in the ECP is 152' with three travel lanes in each direction and the possibility for four.

Archibald Avenue becomes River Road after is crosses the Santa Ana River. The ultimate width for River Road in the Norco General Plan is 100' with only two travel lanes in each direction. Under buildout conditions there would have to be a transition from three lanes to two lanes north of the bridge, and could result in

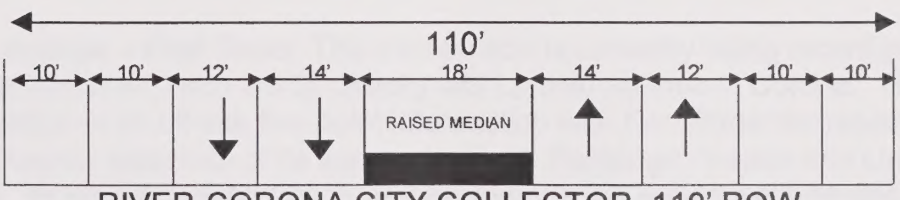
congestion in the vicinity of, and south of the bridge. Of concern also is that River Road is partly within the jurisdiction of the City of Corona. Those standards are addressed in the following seciton.



ARCHIBALD/RIVER -RIVERSIDE COUNTY URBAN ARTERIAL, 134' ROW
(PROPOSED, NOT ADOPTED)



RIVER-NORCO CITY COLLECTOR, 100' ROW



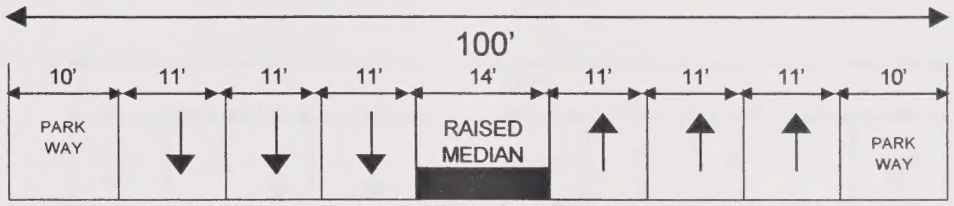
RIVER-CORONA CITY COLLECTOR, 110' ROW

3.3.2 CITY OF CORONA

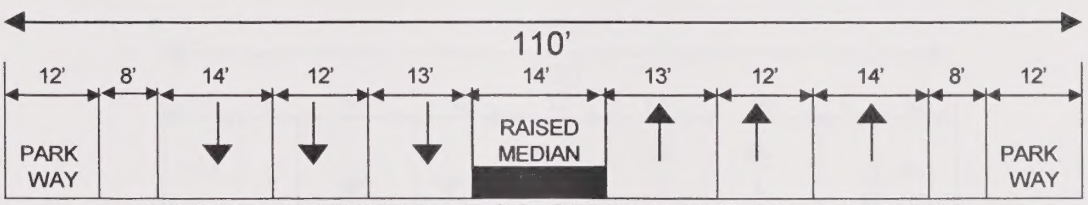
The area to the south and southwest of the City is located in the City of Corona. The Circulation Element of the Corona General Plan shows ultimate widths for roads but does not contain any future traffic projections. For projected traffic volumes, a traffic study that was prepared for the Main Street Specific Plan was used. The specific plan is located at the south end of Hamner Avenue where it enters the City of Corona and becomes Main Street.

The primary traffic connections between the City of Norco and the City of Corona are: Hamner Avenue – Main Street; River Road which runs generally parallel to the City Boundary running alternately in and out of the two cities until it enters County jurisdiction on the north; and Hidden Valley – McKinley which is the City boundary eastward to Norco Hills Road. Secondary traffic connections occur along Norco Hills Road which also is the City boundary; Parkridge – El Paso; Lincoln – Pacific – First; and Second – Country Club.

Hamner Avenue – Main Street: Hamner Avenue has an ultimate right-of-way width of 110' with three travel lanes in each direction while Main Street has an ultimate right-of-way width of 100', that can also accommodate six travel lanes.



MAINSTREET-CORONA CITY MAJOR, 100' ROW



HAMNER AVENUE-NORCO CITY MAJOR-6E, 110' ROW

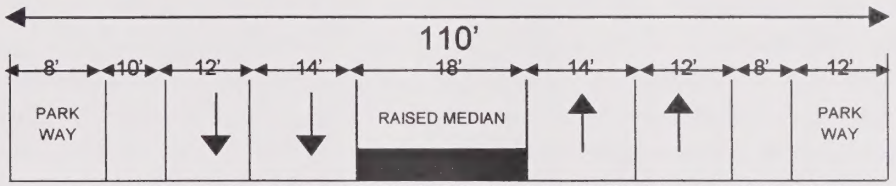
Lincoln Avenue – First Street: This intersection is currently being reconfigured so that First Street in Norco will tie directly into Lincoln Avenue in Corona. The current configuration is an off-site five-point intersection with First Street terminating at Pacific Avenue just north of its intersection with Parkridge Avenue and Lincoln Avenue. In the new configuration, Pacific Avenue will end in a cul-de-sac, and First Street will be re-aligned so as to intersect Parkridge Avenue directly across from Lincoln Avenue. Both First Street and Lincoln Avenue are 84 foot right-of-ways where they will intersect Parkridge avenue which allows four travel lanes.

Corydon Avenue: Northeast of River Road, Corydon Avenue is in Norco, and southeast it is in Corona. In both jurisdictions, the right-of-way is 88 feet which allows four travel lanes. The remaining primary connections between the cities of Norco and Corona occur along streets that also serve as the boundaries between the two cities (i.e. Hidden Valley Parkway and Norco Hills Road).

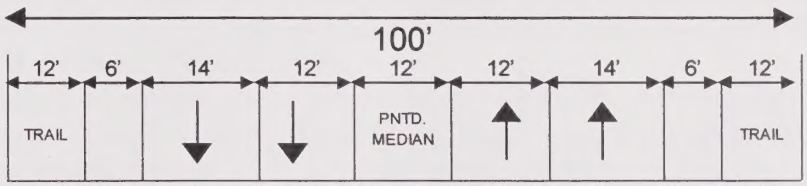
3.3.3 CITY OF RIVERSIDE

The City of Norco shares a common boundary with the City of Riverside on the east. Most of the boundary follows the ridgeline where there are no road connections. The only direct road connection between the two cities is North Drive/Arlington Avenue in the northeast corner of the city. As has been noted, the combination of Arlington Avenue, North Drive, California Avenue, and Sixth

Street serves as an alternate/short-cut route between Riverside and the I-15 Freeway. Arlington Avenue is designated as an "arterial' in the City of Riverside General Plan within a buildout right-of-way width of 110 feet that accommodates two through lanes in each direction. In Norco, North Drive is categorized as a "Major-4E" class roadway with an ultimate width of 100' and four travel lanes.



ARLINGTON-RIVERSIDE CITY ARTERIAL, 110' ROW



NORTH DR.-NORCO CITY MAJOR (4E), 100' ROW

3.3.4 RIVERSIDE COUNTY TRANSPORTATION COMMISSION

In 1990 the State Legislation required each metropolitan county in the state to prepare a "Congestion Management Program" and authorized each county to designate a "Congestion Management Agency" (CMA). The Riverside County Transportation Commission was designated as the CMA for Riverside County. Specifically the "Congestion Management Program" (CMP) is an effort to directly link land use, transportation, and air quality issues to determine reasonable growth management programs and to effectively use transportation funds.

The designation of the CMP system of highways and roadways is based on a set of optional criteria as follows:

- All state highway facilities (including interstates) in Riverside County
- Routes identified on CALTRANS' "Functional Classification System" maps as "Principal Arterials"
- Designated expressways
- Facilities linking cities/communities and major activity centers (shopping malls, industrial/business parks, stadiums, etc.)

The only roadway within the City limits that is included in the Riverside County CMP system of highways and roadways is Interstate 15 which is not under jurisdiction of the Norco General Plan.

Part of the CMP is the incorporation of a "trip reduction and travel demand element" that promotes alternative transportation methods" implemented through Transportation Demand Management (TDM) projects. The CMA has facilitated a number of TDM projects through the use of Measure "A" Commuter Assistance Program funds and through cooperative projects involving CALTRANS and local jurisdictions. These projects are anticipated to include park-n-ride lots, commuter stations, rail and feeder service. In addition, each agency was required to adopt its own TDM ordinance. The City of Norco adopted a TDM ordinance on February 3, 1993. That ordinance incorporated as Section 18.54 of the Zoning Code encourages ride-sharing for large employers, and the incorporation of trip reducing elements into project design such as bicycle racks, bus turnouts, on-site amenities, etc.
Since there are no roads under jurisdiction of the City of Norco that are included in the County system of highways and roadways, compliance with the CMP is limited to implementation of the City's TDM Ordinance. That ordinance was formulated after a sample ordinance that had been supplied at the time by the Western Riverside Council of Governments and was in accordance with South Coast Air Quality Management District and CMP policies. For large employer's where ride-sharing is encouraged, compliance has been self-regulated thus far with the individual employers reporting directly to the South Coast Air Quality Management District. During the project review process for new projects, the City incorporates as feasible, design elements to encourage the use of mass transit and alternate forms of transportation.

3.4 INFRASTRUCTURE NETWORK

3.4.1 WATER SYSTEM

The City of Norco has completed a Water Master Plan since the last update of the Circulation Element in 1992. All distribution lines for water service in the City are existing and available. Domestic and irrigation services are provided through the City's Water Department. The City uses the following sources for its water supply:

- Wells owned by the City in both the Chino and Temescal basins. Water from these sources is treated in the City before it goes directly into the City's water supply system;
- On-going water agreement with the City of Corona to have their water fed into the City's system in times of need and demand;

- Agreement with the City of Corona to provide water to portions of the Norco Hills Specific Plan until such time as there is replacement water from the City's system;
- On-going water agreement with the Jurupa Community Services District to have their water fed into the City's system in times of need and demand.

The City is exploring alternative sources of potable water to mitigate State concerns and continue to improve overall quality.

- ☐ Water from the Chino de-salter located at the terminus of Pedley Avenue which draws water right out of the river basin and treats it there. This water is available but needs to be pumped up to the City's water line. The City anticipates taking water from this de-salter beginning in June 2000.
- ☐ Water from wells located in the California Rehabilitation Center (CRC) that are currently owned by the CRC and which may be transferred to the City wherein the City would then be responsible for providing water to CRC.
- ☐ The City is hoping to adjust our existing arrangement with the City of Corona that requires a 24-hour notification before water is provided so that a certain volume of water would be available on demand at all times without notification.
- ☐ An option for the future, but which is not feasible at this point, is to provide reclaimed water infrastructure to deliver reclaimed water that is now available to various public areas for landscape watering (i.e. parks and golf course)

3.4.2 SEWAGE SYSTEM

Sewer service for the City is provided through the Public Works Department. The entire City with the exception of a small number of residences have a sewer main from which a feeder line can be extended to the house. The only exception is the California Rehabilitation Center which connects directly into the Santa Ana River Intercept (SARI) line. Sewage in that line is directed to a treatment facility in Orange County. Otherwise, all new and existing development, whether commercial or residential, must connect into the City sewer where it is conveyed to a treatment center. City sewage is treated at the Archibald Treatment Plant located north of the Santa Ana River in which the City is part owner.

For residences that are not currently connected to the sewer, the residents have the responsibility of paying for the connecting feeder lines, however, an assistance

program is available for qualifying lower income homes. The majority of the City is hooked-up to the public sewer system. On-site septic systems are being phased out as redevelopment occurs and as property sales occur. Existing residences still on septic systems are required to hook up to the sewer system before a sale of the residence can occur.

3.4.3 STORM DRAIN

The City of Norco Master Drainage Plan consists of two major components, the first is the Master-Planned storm drainage facilities which are designed by the Riverside County Flood Control and Water Conservation District (RCFD), and incorporated into the City's plan; the second is the underground storm drain system for nuisance run-off maintained by the City. Regional facilities are approved and maintained by RCFD and are constructed in conjunction with the City. The City Public Works Department maintains the run-off storm drains that take normal surface nuisance run-off and convey it to County maintained facilities (flood channels, retention basins, etc.). The City's Master Drainage Plan also establishes a program for the payment of drainage impact fees for new development.

Because of the rural nature of the City of Norco and the fact that many of the original streets were constructed without any curb and gutter, there is potential for storm run-off to collect and run uncontrolled across street pavement and trails. In new tracts this is controlled with rolled curbs that are required with street improvements. These are designed to collect surface run-off under ordinary storm situations. For a heavier storm (the worst storm that can be anticipated in 10 years) the newer streets are designed so that the run-off is contained within the top of curbline on each side of the street. For the worst storm that could be anticipated in 100 years, the newer streets are designed so that run-off is contained between the two street right-of-way lines. In areas where there has not been curb and gutter improvements, these run-off amounts are not directed or controlled within the streets. The result is the potential for erosion damage to streets and trails.

The installation of rolled curb and gutter (the Norco standard) is typically the responsibility of the property owner; or it can be accomplished through the establishment of an area-wide assessment district. Currently the City does not have an assessment district for the installation of curb and gutter on developed streets. The current city policy for public expenditure to install curb and gutter is that funds only be appropriated in situations that are determined to be of critical importance to imminent public health, safety and welfare; and only as funds become available. The City does not have a designated fund for the on-going installation of curbs and gutters. A new city policy and funding mechanism would have to be implemented to have a City program for this type of public improvement.

4. IMPLEMENTATION MEASURES

The City's Circulation Element addressed a range of circulation-related issues including the provision of a safe and efficient street system, adequate off-street parking, truck circulation routes, pedestrian, equestrian, and bicycle considerations, and public infrastructure associated with water, sewer, and storm drain systems. Implementation measures are summarized as follows:

4.1 MASTER PLAN OF STREETS

4.1.1 CITY/REGIONAL CIRCULATION: Arterial streets within the planned street system will be constructed and maintained according to the Circulation Plan based on standards related to their function and traffic capacity.

Responsible Agency: Public Works/City Engineer/Department of Planning

Funding Source: Development Fees/Exactions, City Capital Improvements Program, Maintenance Program, and available State and Federal funding.

Time Frame: Ongoing

Related Circulation Element Policies: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9

4.1.2 TRANSPORTATION SYSTEM MANAGEMENT (TSM): To maximize the capacity of the existing and planned traffic system, capital improvements such as re-striping, spot widening, and traffic signal coordination will be made.

Responsible Agency: Public Works Department

Funding Source: Development Fees/Exactions, City Capital Improvements Program, Maintenance Program, and available State and Federal funding.

Time Frame: Ongoing

Related Circulation Element Policies: 1.57

4.1.3 TRANSPORTATION DEMAND MANAGEMENT (TDM): Following the Air Quality Management Plan for the South Coast Air Basin, employers of over 100 employees will be involved in a program aimed at reducing the number of vehicles using the roadway system during peak hours through van-pooling, ride-sharing, staggered work hours and other methods.

Responsible Agency: SCAQMD/City of Norco

Funding Source: Development Fees/Exactions, City Capital Improvements Program, Maintenance Program, and available State and Federal funding.

Time Frame: Ongoing

Related Circulation Element Policies: 1.11 and 1.12

4.2 PUBLIC TRANSPORTATION PLAN

4.2.1 BUS SERVICE: The Riverside Transit District (RTD) will offer fixed route service on local and express routes. Park-and-ride facilities will be provided to promote additional express bus service along the freeway corridor.

Responsible Agency: Riverside Transit District/Caltrans

Funding Source: RTD/Caltrans

Time Frame: Ongoing

Related Circulation Element Policies: 2.2, 2.3, 2.4

4.3 NON-MOTORIZED TRANSPORTATION

4.3.1 PEDESTRIAN/EQUESTRIAN CIRCULATION: Pedestrian/Equestrian Trails exist along most City arterial streets and will be constructed as part of the improvements to new arterial roadways to facilitate safe and convenient pedestrian/equestrian movement. In addition, improvements to the equestrian trail system will be implemented according to the Norco Master Plan for Parks, Recreation & Open Space.

Responsible Agency: Public Works Department

Funding Source: Development Fees/Exactions, City Capital Improvements Program, Maintenance Program, and available State and Federal funding.

Time Frame: Ongoing

Related Circulation Element Policies: 2.1, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12

4.3.2 BICYCLE FACILITIES: A bicycle trail plan shall be established utilizing existing street pavements in conjunction with the proposed Crest to Coast Trail along the Santa Ana River. Bikeways will be maintained and provided within the City pursuant to that plan to promote the use of bicycles. These bikeways will be integrated into the overall County bikeway system.

Responsible Agency: Public Works Department

Funding Source: Development Fees/Exactions, City Capital Improvements Program, Maintenance Program, and available State and Federal funding.

Time Frame: Ongoing

Related Circulation Element Policies: 2.5, 2.6

4.4 PARKING

4.4.1 OFF-STREET REQUIREMENTS: The City's Zoning Ordinance includes off-street parking requirements for various types of developments and allowances for joint use of parking facilities where an appropriate mix of uses exists.

Responsible Agency: Department of Planning and Community Development/Public Works Department.

Funding Source: Development Fees/Exactions

Time Frame: Ongoing

Related Circulation Element Policies: 4.1, 4.2

4.5 TRUCK ROUTES

4.5.1 TRUCK ROUTE DESIGNATION: Planned primary truck routes will be identified, signed and improved to accommodate truck travel.

Responsible Agency: Department of Planning and Community Development/Public Works Department

Funding Source: City Capital Improvements Program and Maintenance Program/Development Fees/Exactions

Time Frame: Ongoing

Related Circulation Element Policies: 3.2

4.6 INFRASTRUCTURE

4.6.1 WATER SYSTEM: The City's Water Department provides domestic and irrigation services.

Responsible Agency/Department: City Water Department

Funding Source: User Fees/Development Fees

Time Frame: Ongoing

Related Circulation Element Policies: None

4.6.2 SEWAGE SYSTEM: The City provides sewage collection and conveyance service for processing at the Joint Powers Archibald facility.

Responsible Agency/Department: Public Works Department

Funding Source: User Fees/Development Fees

Time Frame: Ongoing

Related Circulation Element Policies: None

4.6.3 STORM DRAIN SYSTEM: The Riverside County Flood Control and Water Conservation District is responsible for storm drain master planned facilities. The City's Public Works Department maintains non-master planned facilities.

Responsible Agency/Department: Riverside County Flood Control and Water Conservation District/City Public Works Department

Funding Source: Drainage Fees

Time Frame: Ongoing

Related Circulation Element Policies: None

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